



MASTER'S DEGREE IN
ADVANCED STUDIES
IN DESIGN-BARCELONA
(MBDESIGN)



UNIVERSITAT DE
BARCELONA



UNIVERSITAT POLITÈCNICA
DE CATALUNYA
BARCELONATECH

International Campus of Excellence

MASTER'S DEGREE IN ADVANCED STUDIES IN DESIGN-BARCELONA (MBDESIGN)

The interuniversity master's degree in Design-Barcelona (UPC-UB) is a multidisciplinary master's degree in which creativity, innovation and research are applied as tools of knowledge and proposition for the design of the future. It arises in an integral, broad and cross-disciplinary sense, characteristic of the design made in Barcelona, which has become an international benchmark in recent decades. In a propositional approach, it provides new perspectives on theoretical reflection, participatory networking strategies and the most innovative trends in new products. Tasks are carried out through design workshops, thematic projects, collaborative work, materials and technology research laboratories and a digital manufacturing laboratory.

The master's degree lasts one academic year, is worth 60 ECTS credits and consists of a compulsory common stage of 15 ECTS credits that takes a cross-disciplinary approach, and a second elective stage of 30 ECTS credits that includes five specialisations taught by expert teaching staff from various benchmark schools. The master's degree ends with an individual master's thesis that is worth 15 ECTS credits.

The specialisations are:

- Contemporary Design (taught in English)
- Design, Innovation and Technology (taught in English)
- Industrial Design Engineering (taught in Spanish)
- Art Direction in Design (taught in Spanish)
- Design Research (a cross-cutting specialisation that deals with the previous four)

All the specialisations end with a specific master's thesis worth 15 ECTS credits, which can involve a project or research. In addition to these five pathways, there are also common optional subjects dealing with business, intellectual property and entrepreneurship topics.

Language. Each specialisation, including the common subjects and the master's thesis, is taught in English or Spanish (see above). For the Design Research specialisation, since all its subjects are part of the other four specialisations both languages are required.

CURRICULUM

Total Number of Credits	60 ECTS credits
Compulsory subjects	15 ECTS credits
Optional subjects / Specialisation	30 ECTS credits
Master's thesis	15 ECTS credits

The master's degree has a structure that includes 15 compulsory ECTS credits that are common for all students:

Compulsory subjects / Common subjects	15 ECTS credits
Design, Theory and Criticism	5 ECTS credits
Design, Project and Environment	5 ECTS credits
Design, Technology and Innovation	5 ECTS credits

The five specialisations, which are worth 30 optional ECTS credits each, are described below. Each one is taught by one of the schools:

- 1. Contemporary Design** (in English): Barcelona School of Architecture (ETSAB, Universitat Politècnica de Catalunya (UPC))
- 2. Design Innovation and Technology** (in English): Vilanova i la Geltrú School of Engineering (EPSEVG, UPC)
- 3. Industrial Design Engineering** (in Spanish): Terrassa School of Industrial, Aerospace and Audiovisual Engineering (ESEIAAT, UPC)
- 4. Art Direction in Design** (in Spanish): Faculty of Fine Arts (Universitat de Barcelona (UB))
- 5. Design Research:** ETSAB, EPSEVG, ESEIAAT (UPC), Faculty of Fine Arts (UB)

To obtain the specialisation, a minimum of 25 ECTS credits must be taken and passed (of which 20 ECTS credits must be for compulsory subjects). The remaining 5 ECTS credits, up to 30, can be taken as another subject in the same specialisation or any other from the offer of optional subjects common to all the specialisations.

At the end of the master's degree, students must pass the 15 ECTS credits of the master's thesis in the chosen specialisation. Students who are allowed to pursue two specialisations will have to pass a specific master's thesis suited to the curriculum followed throughout the master's degree. The master's thesis includes specific research in design and may be on a topic that can later be developed in a doctoral thesis.

Compulsory subjects 15 ECTS credits	Optional subjects / Specialisations 30 ECTS credits	Master's thesis 15 ECTS credits
Common subjects	Contemporary Design Design, Innovation and Technology Industrial Design Engineering Art Direction in Design	Master's thesis
	Design Research	
	Common optional subjects	

PROFESSIONAL OPPORTUNITIES

- Academic and theoretical reflection. Access to the doctoral degree in Design.
- Applied design agencies and organisations in social, health and/or welfare areas.
- Companies and industries, new product development offices, application of design in new areas and implementation in emerging sectors.
- Public and private organisations related to markets, products, consumption and the environment.
- Social networks, image and communication. New media and global message design.
- Cultural organisations related to society, culture and the object and dissemination, reflection and debate on these topics.

SPECIALISATIONS

1 Contemporary Design (taught in English) Barcelona School of Architecture (ETSAB, UPC)

The subjects deal with theory and practice simultaneously. The specialisation is focused on new challenges in contemporary design and uses the creative process of design as a tool to solve new products and, at the same time, as a research tool. The subjects cover different scales that range from the personal object, furniture and domestic space to urban furniture, urban spaces and communication and transport systems. New technologies (3D printing, robotisation, new materials, etc.) and social movements (citizen participation, situationism, psychogeography, etc.) are taken as points of reference, establishing relationships between design, culture (1), new technologies and the environment. Architecture and City acts as a general reference framework.

Contemporary Design addresses issues such as Industrial design, art and emotional design / Furniture and indoor environments / Customisation of objects / Ephemeral architecture and temporary events / Microarchitecture / Urban space and furniture / Communication and information / Urban art and land art / Transport systems and public space / Design, collective participation and urban regeneration / Design, culture and exhibitions (1) / Neo-vernacular architecture and new construction systems.

Project Strategies (compulsory)	10 ECTS credits
Creativity, Invention and Emotion in Design	5 ECTS credits
Integral Design, Systems and Programs	5 ECTS credits

Materiality, Representation and Form Design (compulsory)	10 ECTS credits
Design and Materiality	5 ECTS credits
Representation and New Formats	5 ECTS credits

Contemporary Design Research (5 optional ECTS credits)*	10 ECTS credits
Sustainable Reality and Future. Environment and Product	5 ECTS credits
Design Culture. Architecture and Exhibition (1)	5 ECTS credits

(1) The subject Design Culture. Architecture and Exhibition is taught in collaboration with the Barcelona Design Museum.

2 Design, Innovation and Technology (taught in English) Vilanova i la Geltrú School of Engineering (EPSEVG, UPC)

The specialisation is aimed at discovering and working on new challenges in the design discipline that are the result of the acceleration of technological, social and economic change. The subjects in the specialisation connect design and applied and social sciences to create models of products and services that can be adapted to the new demands of society and the environment.

The subjects allow students to obtain the vision and the tools to apply a design-technology-society strategy to the development of innovation projects. The topics worked on include Collective dimension of design / Design guided by data / Network creativity / Complex systems / Innovation and technology.

Collective Design (compulsory)	10 ECTS credits
Design and Society	5 ECTS credits
Network Creativity and Technology	5 ECTS credits

Knowledge Management (compulsory)	10 ECTS credits
Data-Driven Design	5 ECTS credits
Design Process in Complex Systems	5 ECTS credits

Research in Design, Innovation and Technology (5 optional ECTS credits)*	10 ECTS credits
Methods and Processes of Research in Design, Innovation and Technology	5 ECTS credits
Innovation-Research in Design and Technology	5 ECTS credits

* Subjects of the Design Research specialisation.

Common optional subjects Additional optional subjects in all the specialisations

Design, Management and Business (common optional subjects)	10 ECTS credits
Fundamentals of Business for Designers	5 ECTS credits
Industrial and Intellectual Property	5 ECTS credits

3 Industrial Design Engineering

(taught in Spanish)

Terrassa School of Industrial, Aerospace and Audiovisual Engineering (ESEIAAT, UPC)

The aim of this optional subject area is for students to acquire advanced engineering techniques in industrial design. This means an intensification of their knowledge of materials' selection criteria and transformation processes, as well as the practical implementation of these materials following creative criteria and trends.

The subject area also focuses on perfecting form development techniques using CAD system applications in areas such as product engineering and automotive and reverse engineering and generative modelling. This generation of forms leads to the creation of prototypes, during which advanced techniques, such as programmable logic and the Arduino standard, are explained.

Students also delve deeper into research and innovation topics, and analyse techniques and methodologies in industrial design research, which they apply to both the basic conceptual design and the development of the final product.

Advanced Geometry and Prototyping (compulsory)	10 ECTS credits
Advanced Geometry in Design	5 ECTS credits
Prototyping	5 ECTS credits

Design and Materials (compulsory)	10 ECTS credits
Study and Technical Analysis of Materials	5 ECTS credits
Practical Application of Materials in the Design Process	5 ECTS credits

Methodology and Research in Industrial Design Engineering (5 optional ECTS credits)*	10 ECTS credits
Research, Development and Innovation in Product Design	5 ECTS credits
Research Methods and Processes Applied to Industrial Product Design	5 ECTS credits

4 Art Direction in Design

(taught in Spanish)

Faculty of Fine Arts (UB)

This specialisation focuses on the application and development of art direction in the field of design. The subjects cover design projects and graphic applications, graphic and typographic architecture, information design and the development of areas and methods of theoretical and critical research on aesthetics and design.

Design and Art Direction. Projects Coordination (compulsory)	10 ECTS credits
Art Direction in Design Projects	5 ECTS credits
Graphic Applications	5 ECTS credits

Design and Art Direction. Projects Development (compulsory)	10 ECTS credits
Graphic Architecture and Typography	5 ECTS credits
Information Design	5 ECTS credits

Research in Design and Art Direction (5 optional ECTS credits)*	10 ECTS credits
Theoretical and Critical Research on Design:	
Humanities and Social Sciences Areas and Methods	5 ECTS credits
Aesthetics and Theory of Design	5 ECTS credits

5 Design Research

ETSAB, EPSEVG, ESEIAAT (UPC) - Faculty of Fine Arts (UB)

This is a cross-disciplinary specialisation that is developed through the research subjects (*) of the other four specialisations, which constitute the compulsory part of this specialisation (25+5 ECTS credits). The unifying element of the course is the subject of study and research chosen by students, so studying part of all the specialisations provides them with different views on the research subject. The specialisation is focused on the study of cross-disciplinary themes that are very common in the field of design and allows the kinds of topics that cannot be included in any of the other specialisations to be studied, even though research is part of all of them.

Design, Studies (common optional subjects)	10 ECTS credits
Theory, History and Historiography of Design	5 ECTS credits
Social Sciences Applied to Design	5 ECTS credits

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Coordinating school:
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Application, admission and enrolment information:
www.etsab.upc.edu/en/studies/mbdesign

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